

ABSTRACT

A method of flotation processing ores and other mineral materials containing soluble nonferrous base metal and sulfide minerals involves dissolving the soluble nonferrous base metal and precipitating the soluble nonferrous base metal in the form of a floatable precipitate that is collected as part of a sulfide concentrate. The use of an oxygen-deficient flotation gas, such as nitrogen gas, promotes the precipitation of the floatable precipitate. A method for removing dissolved nonferrous base metal from solution involves contacting the solution with a particulate containing sulfide minerals under conditions promoting precipitation of the nonferrous base metal onto the sulfide mineral.

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